

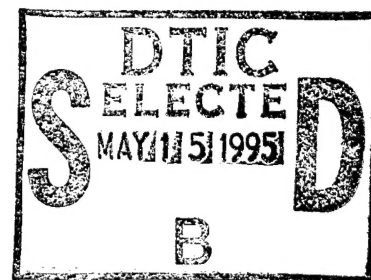
NATIONAL AIR INTELLIGENCE CENTER



ENGLAND DEVELOPS WORLD'S FASTEST OPTIC SWITCH
BREAKTHROUGH IN HIGH-SPEED COMMUNICATIONS

by

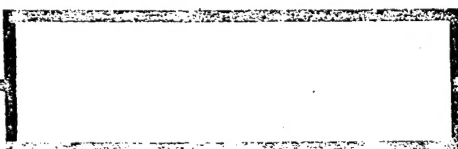
Sheng Li



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ENGLAND DEVELOPS WORLD'S FASTEST OPTIC SWITCH BREAKTHROUGH IN HIGH-SPEED COMMUNICATIONS

Li Sheng

England's Gelasige [Translator: phonetic spelling] University has successfully developed the world's fastest optical switching device, allowing for a major breakthrough in high-speed communications.

This switching device is called a non-linear direct coupler. It is a type of all-optical switch which operates with an extremely short strong laser pulse. The laser pulse is focused on a transistor waveguide and can change the optical properties of the transistor; thus by changing the laser pulse intensity, it is possible to change the light emitted by the transistor, thus changing the size of the switching pulse.

This switch was completed through cooperation between the electronics and electrical engineering departments. The testing was done by a long-time partner of this university, the Photoelectric and Laser Research Center at the University of Florida in the United States. They used a 10-ps laser pulse for testing and displayed this time marker instantaneously. The scientists on this research team and their American collaborators strongly believe that this is the world's fastest optical switch.

One other important characteristic of this switch is that it basically does not consume energy. Although this switch is still in the research stage, it is predicted that it will someday change the way people communicate.

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